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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/670,981 | 09/25/2003 | Harry Eugene Flynn | KMG1097-US1 | 8092 |
| 36732 | 7590 | 03/30/2006 | EXAMINER | |
| TRONOX C/O GUERIN & RODRIGUEZ, LLP 5 Mount Royal Ave. Mount Royal Office Park Marlborough, MA 01752 | | | HEWITT, JAMES M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3679 | |

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/670,981 | FLYNN ET AL. | |
| | Examiner | Art Unit | |
| | James M. Hewitt | 3679 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-14, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-14 and 28-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 28 and 29 are objected to because of the following informalities:

In claim 28, line 3, "the body section" should be "each body section".

In claim 29, line 1, the phrase "where in the removable liners are" should be replaced with the phrase "wherein each of the removable liners is".

Appropriate correction is required.

Claims 28 and 29 are objected to under 37 CFR 1.75(i), which states "Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation."

Claim 29 is objected to as it depends from claim 28.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 28, lines 3-5, the use of "or" renders the claim indefinite. In lines 3-4, the phrase "each component including a tangential inlet or outlet" erroneously allows for each component to have an inlet, or for each component to have an outlet. In lines 4-5, it is unclear as to which inlet or outlet the phrase "the tangential inlet or tangential outlet containing a removable liner" refers; there is an inlet or outlet on each component.

Claim 29 is rejected as it depends from claim 28.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Cocchiara et al (US 4,301,651).

With respect to claim 12 and with reference to FIG. 13, Cocchiara et al discloses a piping elbow, comprising: a substantially cylindrical body having a first end (37) and a second end (38), wherein at least one of the ends is removably attached and wherein the body contains a removable liner (40, 41, 42); a tangential inlet (33) attached to the body near the first end having a diameter smaller than the diameter of the body, wherein the tangential inlet contains a removable liner (see FIG. 13); and a tangential outlet (35) attached to the body near the second end having a diameter smaller than the

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diameter of the body, wherein the tangential outlet contains a removable liner (see FIG. 13).

The first end (37) and second end (38) are said to be welded to the reactor. The ends are considered removable insofar as they can be removed by a given means, e.g. a cutting means. Similarly, the liners are considered removable insofar as they could be removed by force.

With respect to claim 13, the method of forming the device is not germane to the issue of patentability of the device itself. A product must structurally distinguish from the prior art. Cocchiara et al meets the claim insofar as the tangential inlet liner and the tangential outlet liner are disposed in a cavity in the body liner. As shown in FIG. 13 and described in col. 8, ll. 49-53, inlet and outlet liners 42 extend into body liner 40 (note the darkened line representing liner 42 that extends into body liner 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cocchiara et al (US 4,301,651) in view of Carty et al (US 4,554,721).

Cocchiara et al does not disclose that the liners are ceramic as required by claim 14. Carty et al teaches that is known to provide an elbow with a ceramic liner (column

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2, lines 50-55) for wear resistance of the fluids on the elbow body. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the liners from ceramic rather than stainless steel as ceramic would be desirable for reasons of both cost and weight and further since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cocchiara et al (US 4,301,651) in view of Forman (US 255,427).

As described above, Cocchiara et al discloses a piping elbow, comprising: a substantially cylindrical body having a first end (37) and a second end (38), wherein at least one of the ends is removably attached and wherein the body contains a removable liner (40, 41, 42); a tangential inlet (33) attached to the body near the first end having a diameter smaller than the diameter of the body, wherein the tangential inlet contains a removable liner (see FIG. 13); and a tangential outlet (35) attached to the body near the second end having a diameter smaller than the diameter of the body, wherein the tangential outlet contains a removable liner (see FIG. 13).

Cocchiara et al fails to teach that the elbow comprises two substantially-identical components, wherein each component includes: a substantially cylindrical body section having a first end and an open second end; a tangential inlet or tangential outlet attached to the body section near the first end, the tangential inlet or tangential outlet

containing a removable liner wherein the second ends of the two components are removably attached to each other. Forman teaches that it is known in the art to provide a pipe joint comprising two substantially identical body portions each having a branch pipe connected thereto. The body portions are removably attached to one another as at E and F. Forming the joint in this manner permits the body portions to be relatively adjusted to permit the branch pipes to be oriented at various angles. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form Cocchiara's body in two halves in order to permit the tangential pipes to be oriented at various relative angles.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cocchiara et al (US 4,301,651) in view of Forman (US 255,427) as applied to claim 28 above, and further in view of Carty et al (US 4,554,721).

Cocchiara et al does not disclose that the liners are ceramic as required by claim 29. Carty et al teaches that is known to provide an elbow with a ceramic liner (column 2, lines 50-55) for wear resistance of the fluids on the elbow body. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the liners from ceramic rather than stainless steel as ceramic would be desirable for reasons of both cost and weight and further since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Response to Arguments

Applicant's arguments filed 1/25/06 have been fully considered but they are not persuasive.

Applicant asserts "Cocchiara does not teach or suggest that at least one end of the cylindrical body is removably attached. One of ordinary skill in the art would not consider welding as a means for removably attaching. Although a welded end may be removed, it is not meant to be removed. Items that are welded, riveted, etc. are not intended to be removed for a very long time, if at all. Whether an end is removably attached or not generally turns on whether the attached end is meant to or intended to be removed, not whether it is physically possible to remove it. Anything can be removed if enough force is applied." The Examiner disagrees. The claims require the ends to be removable. Cocchiara et al's ends are removable as they are able to be removed.

Applicant asserts "Unlike the present invention, there is no teaching or suggestion in Cocchiara that an end or the liners are meant to be removed. The present invention contemplates liners needing to be replaced due to contact with corrosive fluid streams or abrasive fluid streams. Replacing worn liners requires one or more ends to be removably attached. That is, the ends are meant to be removed. The internal lining in Cocchiara on the other hand, is provided to aid in heat retention. There is no suggestion that these internal linings need to be inspected or replaced. In fact Cocchio teaches away from the present invention in the sense that Cocchiara teaches that the internal lining can be attached by crimping the thin stainless steel lining.

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Removing the lining would require that the steel be uncrimped. Crimping and uncrimping steel would cause the steel (i.e., the lining) to weaken and eventually break. It is highly doubtful that Cocchiara intended to break the lining by removing it for inspection." The Examiner disagrees. The claims require the liners to be removable. Cocchiara et al's liners are removable as they are able to be removed.

Applicant asserts "Cocchiara does not teach or suggest a piping elbow comprising two-substantially identical components. Also, Cocchiara does not teach or suggest the need for removable liners as discussed above in regards to claims 12-14. Forman teaches two similar components, but does not teach or suggest two substantially-identical components. In Forman, one component has a flanged rim E and the other component does not. Also, one component has a downward projection J having a screw-thread to receive the end K of a bolt G. The other component has a socket or depression I into which a washer of lead, rubber, or other similar material is fitted." The Examiner disagrees. As discussed above, Cocchiara's liners are removable. And Forman's components, although not identical, can be reasonably considered substantially identical.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

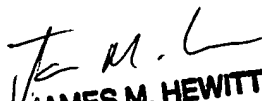
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JAMES M. HEWITT
PRIMARY EXAMINER